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Climate adaptation and agriculture:

Solutions to successful national adaptation plans

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This policy brief explores how developing countries are overcoming the biggest challenges in developing NAPs, outlines examples of successful cross-sector adaptation planning, explores influence and leverage necessary for successful NAP processes, and offers specific recommendations.

Key recommendations

- Countries should consider how **local levels** can be brought into planning and prioritization, where much climate adaptation implementation occurs. Further, **governance institutions need to be adaptive**, in order to adjust response measures as new information on climate impacts develops over time.
- Developing countries and LDCs need to **strengthen capacity** to identify and rank climate risks and prioritize response activities.
- Contributors to and recipients of NAP financial support should **identify sources of NAP implementation finance during the planning phase**. Funding for implementation should be separate from that of NAP planning. Countries that can devote some national budgetary allocations towards implementation may have stronger institutional commitment to the NAP process, and more effectively integrate adaptation strategies into development objectives and existing sectoral policies.

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- **Increased capacity for integrated approaches to adaptation planning** is needed, in order to assess the relationships and trade-offs between rangeland, agriculture, forestry, fisheries and other sectors that may compete for the same resources. Countries also seek assistance to identify climate adaptation and mitigation synergies.
- Countries should **widen stakeholder engagement** in assessment, design, implementation and monitoring of adaptation plans, particularly the **private sector**, which is critical in many contexts for implementation. Inclusion of marginalized groups is important.

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1. Introduction

Climate change threatens one of the most important sectors in many developing countries: agriculture. In some parts of Africa, agriculture directly employs nearly 80 percent of the population. The National Adaptation Plan (NAP) process was established in 2010 within the Cancún Adaptation Framework by the United Nations Framework Convention on Climate Change (UNFCCC). NAPs are intended as a means for countries to reduce their vulnerability to the impacts of climate change, by building adaptive capacity and resilience, while facilitating the integration of climate change adaptation into development planning processes and strategies across all sectors and scales.

The purpose of this brief is to share insights on agriculture and NAPs with national-level decision makers in developing countries and Least Developed Countries (LDCs), multilateral agencies, UNFCCC negotiators and donors. This brief explores how countries are overcoming the biggest challenges in developing NAPs, outlines examples of successful cross-sector adaptation planning, explores influence and leverage necessary for successful NAP processes, and offers specific recommendations.

NAPs are intended to address strategic medium- to long-term food security, livelihood, and development pressures related to adapting to climate change. NAPs differ from National Adaptation Programmes of Action (NAPAs) that focus on the LDCs and address short-term "urgent and immediate adaptation needs".They are intended to encourage integrated development and cross-sector planning for climate-change adaptation. NAPs will need to be iterative, as many countries lack robust data, yet must begin to make decisions in the face of uncertainty, and refine response measures as data and information systems evolve.

To inform decision makers on the status of National Adaptation Planning (NAP) processes in the agricultural sector of developing countries in East Africa, West Africa and South Asia, a 2013 report *Planning climate change adaptation in agriculture: Meta-synthesis of national adaptation plans in West and East Africa and South Asia* from the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) brings together evidence from 12 countries in these regions (see Table 1 for countries reviewed and status of their adaptation planning). The scope of this review focused primarily

Table 1. CCAFS priority countries reviewed and adaptation planning status (Kissinger et al. 2013)

Country	Adaptation planning status
East Africa	
Ethiopia	NAPA, Climate-Resilient Green Economy Strategy
Kenya	National Climate Change Response Strategy (NCCRS); National Climate Change Action Plan + NAP in process
Tanzania	NAPA, National Climate Change Strategy
Uganda	NAPA
West Africa	
Burkina Faso	NAPA
Ghana	National Climate Change Adaptation Strategy; National Climate Change Policy
Mali	NAPA
Niger	NAPA
Senegal	NAPA + Climate Change Plan in process
South Asia	
Bangladesh	NAPA + Climate Change Plan
India	National Climate Change Plan
Nepal	NAPA

on climate adaptation in the agriculture sector, but also included consideration of related sectors, such as water, forests and other land uses (Kissinger et al. 2013).

The report was followed by a two-day workshop on November 13-14, 2013 at the UNFCCC Conference of the Parties in Warsaw, Poland, where 37 policy makers representing 10 different countries exchanged experiences and strategies for developing NAPs.

The report presents a framework for assessing national adaptation planning processes that gives a 'dashboard' view of country progress on key NAP processes and policy elements (Figure 1). Assessing the 12 countries against this single analytical framework provides insights into where countries might take further steps to strengthen their national adaptation process, as well as a sense of where there are common needs, barriers and opportunities across the countries.

The study highlights a number of areas of concern in the adaptation planning process. For example:

- **Most of the countries conducted impact assessments—the foundation of the planning process—on a purely sectoral basis and many lacked consistent, comprehensive, and coordinated approaches in their vulnerability and risk assessments** (the first pillar on the left in Figure 1). As a result, different regions and sectors commonly use different methodologies for their assessments, which makes it difficult, if not impossible, to compare and prioritize risks and adaptation activities across sectors or regions.
- Most **did not assess the economic implications of climate risks**, which compromises the design of adaptation strategies and measures.

Despite these shortcomings, the 12 countries reviewed most commonly prioritize:

1. protecting the most vulnerable and poor (rural) populations;
2. cost-effectiveness (or overall cost);
3. promoting sustainable development and/or natural resource use;
4. improving livelihoods (or avoiding losses): and
5. promoting adaptive capacity.

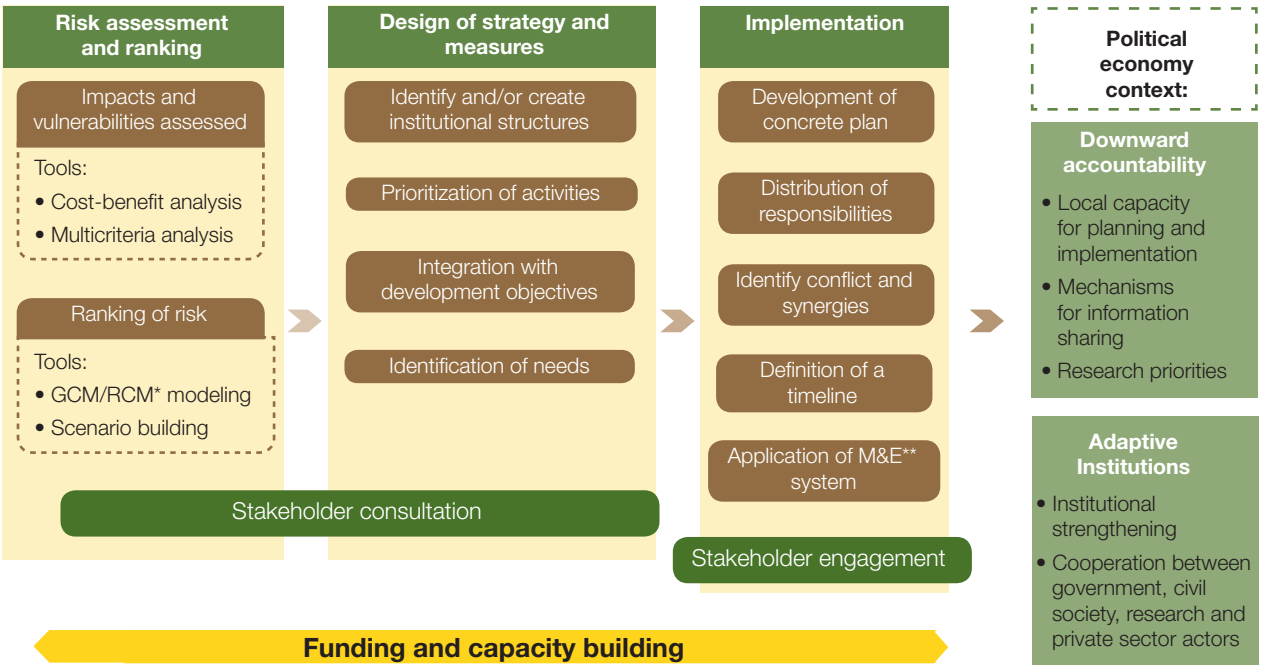

Figure 1. Analytical framework: National adaptation planning processes (Kissinger et al. 2013).

**GCM/RCM: General Circulation Model / Regional Circulation Model - ** Monitoring and Evaluation*

- **Another weakness identified is that many of the countries lack an institutional framework and governance structure to effectively coordinate and implement adaptation activities, many of which are cross-sectoral,** although some are in the process of creating new institutional structures to promote cross-sectoral cooperation. The private sector was also notably absent from most of the planning exercises reviewed. This, combined with a shortage of technically well-qualified staff in key institutions, hampered effective and inclusive planning and creates potential problems for implementation of adaptation measures.
- Funding is a crucial aspect that seems to be often overlooked. **Aligning and mainstreaming activities into national development or sector plans can help identify and procure funding for implementation, especially through government budgetary allocations.** Many adaptation and food security programs currently being implemented, however, are not well integrated into a broader national strategy, but appear to be driven by bilateral and/or multilateral funding sources. As financing is needed for implementation, adaptation plans should consider how sufficient finance can be mobilized, particularly at local levels where adaptation response measures are most crucial.

2. Overcoming NAP challenges

A main objective of the 10-country NAP workshop in late 2013 was to share experiences in developing adaptation plans for the agriculture and livestock sector, and to identify future research and capacity needs for NAPs. As such, the identification of barriers and conflicts formed a basis for assessing future research and capacity needs. Countries presented thirty-one barriers, which were prioritized and grouped, yielding the following 'high priority' barriers (Table 2).

Finance is the most commonly identified barrier by workshop countries. This is supported by the report findings, which identified countries as frustrated by the low level of NAPA implementation and adaptation project financing thus far. Further, much of what has been implemented to date are ad hoc projects, primarily funded externally by donors. Country studies commissioned by CCAFS for several countries which informed the report, indicate adaptation and food security programs currently being implemented do not appear to be integrated into a broader strategy, but are driven by bilateral and/or multilateral funding sources. NAPs hold great potential to reverse this trend, although consideration should be given to how to target and facilitate alternative funding sources, particularly from domestic revenues, if NAPs are to gain more traction and show greater implementation success than NAPAs.

Table 2. Prioritization of barriers countries face in NAPs

Barrier	Frequency cited
Lack of organization in access to finance	5
Lack of dedicated finance instruments for CC at national level	5
Insufficient consideration of climate issues in national policies and programmes	4
Unclear funding for implementation	3
Inadequate appreciation of investments in adaptation	3
Lack of long-series climate data	2
Lack of baseline data/information	2
High cost of international expertise and infrastructure and tools for climate research	2
Need for financial planning	2

Climate change risks magnify development challenges for developing countries and LDCs. Yet countries identify the insufficient consideration of climate issues in national policies and programmes as the largest barrier after finance. NAPs provide a means for planning for adaptation at the national level to be coordinated with national sustainable development objectives, plans, policies and programmes. **Linking adaptation strategies to current development programmes can safeguard development investments from climate change impacts, and also result in significant cost savings.**

Given the highly localized, site-specific nature of agriculture, **participants also cited the need for climate change capacity building among lower administrative units, especially at district levels.** Low resolution, broadly aimed policy objectives at the national level require translation by such agents who interact more directly with agricultural communities. Adequate capacity is required (and often lacking) at all required levels.

Finally, improved engagement with regional bodies (e.g. Economic Community of West African States (ECOWAS) in West Africa and New Partnership for Africa's Development (NEPAD) across Africa), for example, was suggested as a strategy for improved NAP development, an arrangement which is currently lacking in many countries. Data and funding are both available within such regional institutions, but these resources can only be made available to countries through improved collaboration strategies which NAPs can potentially provide.

3. Country examples of successful cross-sector adaptation planning

Integrated adaptation assessments and integrated action plans can help overcome the common barrier of lack of cross-sectoral coordination. Countries should assess how to strategically place adaptation priorities within the broader national policy framework, so that policies with precedence over others (such as development and fiscal policies) can guide decision-making and the necessary linkages.

The workshop highlighted several examples of existing cross-sector adaptation planning initiatives.

1. Nepal organized its work around "Thematic Working Groups" for its NAPA completion, led by different line ministries. Besides applying aggregated criteria to develop high priority adaptation options, the thematic working groups also agreed to combine priority activities and develop combined project profiles.
2. Ghana has created the "Akropong Approach," a method for analysis that results in a cross-sectoral project plan. In this approach, a logical framework analysis and multi-criteria analysis is used to identify problems and policy solutions.
3. India's 2nd National Communication portends more robust and integrated adaptation assessments to come, noting "integrated assessments are essential for facilitating the optimal development of institutional and research linkages, projects, and policy recommendations as they enable the best available synthesis of current scientific, technical, economic, and sociopolitical knowledge."
4. One model for how to promote better linkage and integration is the 2012 "Guidelines for Integrating Climate Change Adaptation into National Sectoral Policies, Plans and Programmes of Tanzania," issued by the Tanzanian Vice President's Office.

4. Necessary influence and leverage for NAPs

The CCAFS report found that countries are identifying existing or new institutional structures needed to plan, coordinate and/or implement adaptation strategies and activities, particularly institutional structures that can promote cross-sectoral cooperation. For instance, in Ethiopia, the coordination of climate change activities was moved from the National Meteorological Agency to the Office of the Prime Minister a few years ago. Kenya's draft National Climate Change Framework Policy and a draft Bill being deliberated in Parliament envisions the National Climate Change Council (NCCC) being anchored in the Presidency, with the NCCC being chaired by the Deputy President.

Success of adaptation plans and measures may be attributed more to their prominence in national-level priorities and commitment than where such plans sit in the organizational structure of government (Mullan et al. 2013). Nevertheless, the design of appropriate institutional structures for adaptation should take into consideration which actors and institutions have the most influence and leverage in the NAP policy environment. Workshop participants listed the five most relevant and important actors and institutions in their countries. The results are depicted in Figure 2.

The "climate change council" (or equivalent agency) was identified as the most relevant institution by six countries. While sector-specific ministries are crucial, Ministries of Finance are identified by five countries as being more important for implementation of NAPs than the Ministry of Agriculture or Ministry of the Environment. The remaining agencies ranked as important included the Executive Branch, Parliamentary select committees, budget guidelines, climate change integration guidelines, donor budget support and development partners. While the majority of the eleven institutions identified are agencies, there are several policy documents cited including budget guidelines, climate change integration guidelines, as well donor budget support which could be classified as a financial tool. This short analysis points to an often overlooked reality of climate change adaptation in agriculture: that the Ministry of Agriculture and/or Environment may not be the first point of call, or agency, to be effectively lobbied for successful NAP development. The NAP process must be 'owned' by the central financial and administrative arms of the state, particularly the Ministry of Finance and the National Planning Commission. This is supported by the UNDP-UNEP Global Support Programme lessons learned from early-stage dialogue with LDCs.

5. LDC and developing country experience: LDC Expert Group and submissions to SBI

Delivery partners and countries are sharing information on NAP experiences, providing lessons learned and insights to help inform the UNFCCC negotiations and national-level planning. In early 2014 the LDC Expert Group (LEG) met in Dar es Salaam, Tanzania to 'simulate' a NAP process, identifying key technical considerations for the practical application of the NAP Guidelines in various sectors (UNFCCC 2012). Further, countries, multilateral and bilateral agencies were asked to submit information to the Subsidiary Body for Implementation (SBI) by late March 2014 on how they have either responded to invitations from the Conference of the Parties to the UNFCCC (COP) to support LDC and developing countries, or to share experiences to date on the application of guidelines in NAP preparation. Insights are highlighted below, particularly those that relate to key NAP dashboard elements, as well as the CCAFS report and workshop findings.

▸ LDC Expert Group (LEG):

The LEG NAPs workshop, held in Dar es Salaam, acknowledged the need for better integration of the **Ministry of Finance** in the NAP development process so that financial needs are clearly relayed to relevant decision makers in that area. Engagement with **national planners** for integration of NAPs into development planning processes was also discussed as a means to revisit the NAP at regular intervals through established medium term planning protocols.

Recommendations for the inclusion of gender considerations in NAP development and planning were also discussed during the technical meeting including the disaggregation of data and information for the NAP process by gender and "education, capacity-building and awareness-raising activities to address separately the needs of women, men, and vulnerable groups" (UNFCCC 2014).

Finally, the agricultural and fisheries working group discussed the importance of both short-term variability and long-term progressive climate change. They reminded workshop **participants that NAPs - if promoted alone - could draw focus (and funding) away from short-term needs in favor of long-term objectives when, in fact, both are needed in equal measure**, particularly for the agricultural sector.

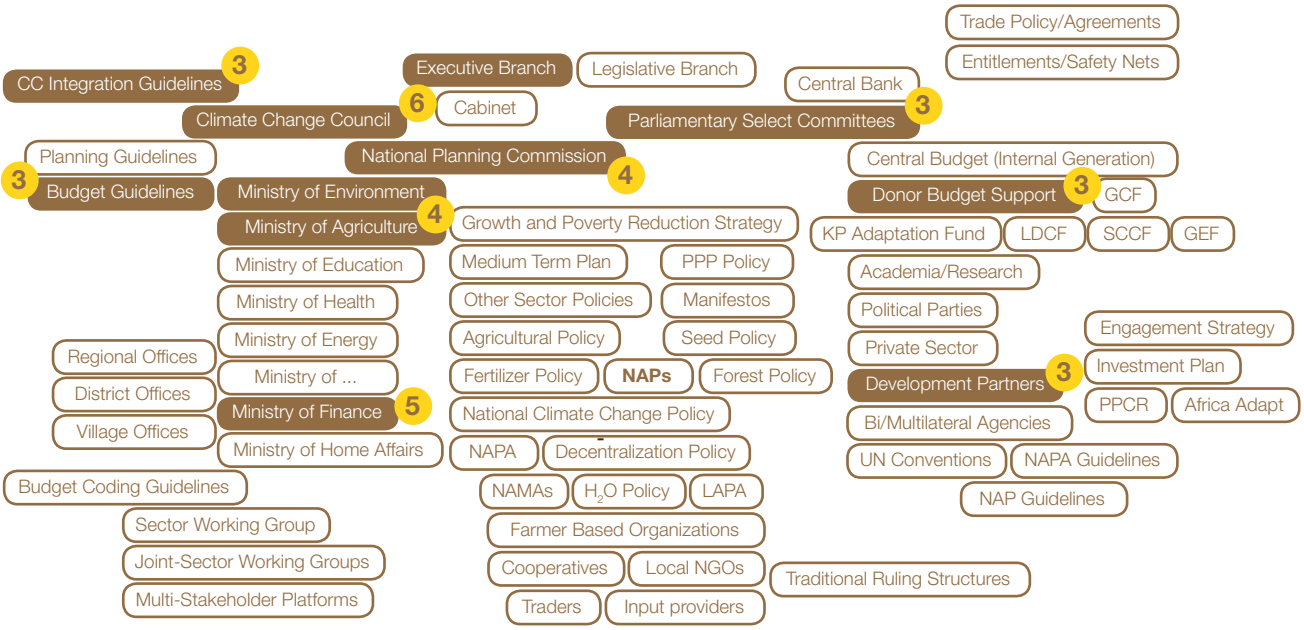

Figure 2. Most relevant actors and institutions[1] to influence the NAP policy environment as listed by Workshop participants.

SBI submissions:

Two key delivery partners for LDCs and developing countries—the World Bank and United Nations Environment Programme (UNEP)/United Nations Development Programme (UNDP) —provide insights relevant to NAP capacity building, financing and implementation, in response to SBI's call for submissions.

While the World Bank Group has not directly supported countries in NAP preparation as called for under the UNFCCC process, it does work through its range of instruments (Country Partnership Processes, Development Policy Instruments, and Investment Loans) that have the potential to inform and feed into national adaptation plans. In particular, the Climate Investment Fund (CIF)-funded Pilot Program for Climate Resilience (PPCR) seeks to mainstream climate resilience into national development planning processes and investments. Based on PPCR experience, the World Bank notes **the importance of continued support towards enhancing adaptive capacities of institutions and communities at both local and national levels.** (World Bank 2014)

In July 2014, the World Bank will strengthen efforts to build resilience through the replenishment of the International Development Association (IDA). This will screen all new IDA operations for short- and long-term climate change and disaster risks and implement multi-sectoral plans and investments for managing climate and disaster risk in development in at least 25 IDA countries. **These countries should assess how to ensure these efforts promote and align with country-driven NAP processes and priorities.**

In June 2013, the UNDP-UNEP established the Global Support Programme (NAP GSP) to assist LDCs with country-driven NAP processes (UNDP-UNEP 2014). While 26 LDCs have sought assistance, the NAP GSP has provided initial support to a handful, while additional resources are sought.

Based on the UNDP-UNEP's initial discussions with LDCs, NAP GSP Partners found that **countries require technical and financial support to identify existing institutional mechanisms and complete a gap analysis for climate mainstreaming that can offer a foundation to build upon,** such as NAPA processes.

The NAP GSP notes that **many country level government representatives are insufficiently aware of the broad institutional nature of the NAP process. NAP processes require coordination and partnerships between Planning, Finance and Environment Ministries,** due to the functions these ministries play in medium- to long-term national adaptation planning. Further, sector ministries such as Agriculture, Water, Infrastructure and Local government are crucial, and enabling institutional environments that support joint efforts are needed for these sectors to effectively contribute to and benefit from NAPs.

[1] *CC: Climate Change - GCF: Green Climate Fund - GEF: Global Environment Facility - LAPA: Local Adaptation Programme of Action - LDCF: Least Developed Countries Fund PPCR: Pilot Program for Climate Resilience - PPP: Public-private partnership policy - SCCF: Special Climate Change Fund.*

Conclusion

NAPs provide a critical process for countries to mainstream climate adaptation interventions, across all relevant sectors and scales. Linking adaptation strategies to planned development projects can safeguard development investments from climate change impacts, and also result in significant cost savings. This is an important benefit that NAPs can provide. The design of appropriate institutional structures for adaptation must take into consideration which actors and institutions have the most influence and leverage in the NAP policy environment. Based on insights from policy makers from 12 countries, the most commonly identified barrier to national adaptation planning is finance, followed by the challenges that countries have in adequately positioning climate issues in national policies, and capacity-related needs. Given the highly localized, site-specific nature of agriculture, climate change capacity building and adaptive governance is needed among lower administrative units, especially at district levels.

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